combining kinds of retailer promotions

EFFECT ON SALES OF SELECTED FOOD PRODUCTS

ERS-65
UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE
MARKETING ECONOMICS DIVISION

PREFACE

Agricultural producers are faced with ever-increasing competition for the consumer's dollar. Many manufacturing industries are placing increased emphasis on promotions which may have adverse effects on the demand for farm-produced goods. To help counter this problem, a broad program of basic and applied research is being carried out with the objective of assisting producers and distributors of agricultural products in maintaining and, where possible, expanding market outlets.

The research results reported here are designed to improve sales of farm products by indicating possibilities for effective use of promotional and merchandising techniques. The application of these results will help producers as well as retailers by increasing consumer demand and improving sales in the marketing system.

The research was conducted under the general direction of George H. Goldsborough. Hugh M. Smith served as project director. The cooperation of Stop and Shop, Inc., in making available its retail stores in the Boston area as laboratories, made this research possible.

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COMBINING KINDS OF RETAILER PROMOTIONS

Effect on Sales of Selected Food Products

By Nick Havas, Violet Davis Grubbs, marketing specialists, and Hugh M. Smith, agricultural economist, Market Development Research Division, Agricultural Marketing Service

SUMMARY

When newspaper advertising, price reductions, and special displays were used together to promote retail sales of food products covered in this report, gains in sales were greater than the sum of the gains associated with the three promotional methods used separately. Likewise, use of any two of the methods together was accompanied by larger increases in sales than use of the same two methods separately. When the three techniques were used in combination to promote a single brand of a product, total sales of the product group increased though sales of the nonpromoted brands in some instances declined to a moderate degree.

These findings were the result of observations in 12 food supermarkets operating under normal conditions. Thirty promotions using one of the selling techniques or various combinations of them were observed over a 10-month period. The promotions were retailer conceived and directed and were not influenced in any way by the researchers. The food products observed were mayonnaise and salad dressing; canned tomato, grapefruit, and pineapple juices; canned cut wax beans, sweet peas, fruit cocktail, applesauce, yellow cling and Elberta peaches; and ground meat.

BACKGROUND, OBJECTIVE, AND PROCEDURE

Advertising, merchandising, and other promotional activities designed to create demand for products and provide services at all levels of the marketing system have developed into an important major industry. Expenditures for advertising alone in the United States are estimated to be 11 billion dollars, of which 17 to 20 percent is believed to be spent for food and food products. Agricultural groups alone in the United States spent an estimated $67 million for the promotion of farm products during 1958. 1/

Retailers, too, devote a considerable amount of money to advertising. In 1958, food retailers in the United States spent an estimated $420 million on advertising. This total is derived by applying 0.84 percent to $50,263 million, the total volume of sales by food stores in 1958. 2/

1/ Frye, Robert E., and Grubbs, Violet Davis. Promotion of Farm Products by Agricultural Groups. U. S. Dept. Agr. Mktg. Res. Rpt. 380, Jan. 1960, 28 pp. illus.

2/ U. S. Bureau of the Census. Monthly Retail Trade Report, Dec. 1959. Feb. 1960, p. 2.

The 0.84 percent represents the ratio of advertising expenditures to gross sales in retail food stores during the fiscal year 1956-57, as reported in Advertising Age. 3/ In addition to advertising, the food retailers devote considerable time and resources to other promotional activities including the use of trading stamps, special displays, coupons, and price discounts.

The purpose of this analysis was to observe the changes in sales associated with the use of specified kinds and amounts of retailer promotions--newspaper advertising, special supplementary displays, and price reduction--when used individually and in combination with one or both of the other methods. The cooperating chain sponsored radio and television programs on a continuing basis during this period of observation. These programs, however, were general in scope, and at no time did they promote the individual commodities analyzed in this report. Therefore, the effects of radio and television advertising were not considered in this analysis.

The information is based on observations during 1957 of sales performance for specific retailer promotions. The data were collected during the course of other research concerning the effectiveness of various types of retail displays and package size combinations for selected food products, results of which have already been published. 4/

Sales of various products were measured during periods when one or more combinations of promotional techniques were used by food retailers. Because some variables that may have influenced sales were neither observed nor controlled, sales fluctuations can be said only to be associated with rather than to have resulted solely from the promotions used. However, certain consistent sales reactions were observed during specific types of promotion. With promotion playing an important role in the food retailer's merchandising plans information of this kind is important to the retailer as well as to producers and consumers.

USE OF SINGLE KIND OF PROMOTION

Several brands and container sizes of mayonnaise and salad dressing were promoted at various times during a 28-week period beginning March 4, 1957. Two of the kinds of promotion used, each independently of the other, were newspaper advertising of less than 2 column inches, and price reductions averaging less than 6 percent. Here, as in all cases mentioned, the newspaper advertising measurements shown were part of a full page food ad. These two types of

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3/ Advertising Age. 30 (18):46-47. May 4, 1959.

4/ Grubbs, Violet D., Smith, H. M., Wischkaemper, P., and Havas, Nick. Effectiveness of Selected Canned Food Displays in Supermarkets. U. S. Dept. Agr. Mktg. Res. Rpt. 371, Nov. 1959, 30 pp., illus.

Havas, Nick, and Smith, Hugh M. Analysis of Retail Display Methods for Mayonnaise and Salad Dressing. U. S. Dept. Agr. Mktg. Res. Rpt. 382, Feb. 1960, 15 pp., illus.

Smith, Hugh M., and Havas, Nick. Displaying Dates in Packages of Different Sizes. U. S. Agr. Mktg. Serv. AMS-349, Nov. 1959, 11 pp. illus.

promotion, when used alone, were not followed by significant change in sales that could be associated with the promotion involved. But it tends to confirm that the amount of advertising and the degree of price reduction made have much to do with the immediacy and size of sales gains.

Changes in sales following use of supplementary in-store displays, without price reduction or advertising, were observed using selected brands of grapefruit and tomato juice in 46-ounce cans, applesauce, fruit cocktail, wax beans, and sweet peas in No. 303 (16-ounce) cans, and sliced yellow cling peaches in No. $2\frac{1}{2}$ (30-ounce) cans. These commodities were placed on special displays at the end of the grocery gondolas at various times for 2-week periods. The special displays were in addition to the regular shelf display (table 1). Total sales of each of the commodities increased when the added display space was used and the increase had no adverse effects on the sales of competing brands. But sales per linear foot of display were no greater from special displays than from shelf.

USE OF TWO KINDS OF PROMOTION COMBINED

There were three occasions to observe sales when use of two kinds of promotion were combined--twice for price reduction plus advertising and once for price reduction plus supplementary display.

Price Reduction and Advertising

Mayonnaise and Salad Dressing

The 16-ounce container of brand A mayonnaise was promoted by two methods for 2 weeks beginning April 15, 1957. The price was reduced about 5 percent and the product was featured in a newspaper advertisement during the first week of the promotion using approximately 1-3/4 by 2 inches of space. The price reduction was of the same magnitude and the advertisement was of the same size as when each of the two kinds of promotion had been used singly for this item on a previous occasion.

When each of the methods was used alone, no noticeable sales gains associated with the promotion were detected but when they were employed in combination, sales during each of the 2 promotion weeks averaged 75 percent more than the sales average of 3 weeks directly prior to the promotion. This sales change is indicated by comparing the 3-week moving average to actual weekly sales of the 16-ounce brand A mayonnaise (fig. 1).

Table 1.--Changes in sales of specified canned foods and competing items, 12 food supermarkets, Boston, Mass., selected weeks, 1957, associated with use of supplementary displays

Commodity and can size	Display space			Weekly sales					
				Per store			Per linear foot		
	Shelf display	Supplementary display 1/	Increase in total	Shelf display only 2/	Shelf plus supplementary display 3/	Increase over shelf alone	Shelf display only	Supplementary display only	Difference (shelf sales = 100)
	Linear inches	Linear inches	Percent	Cans	Cans	Percent	Cans	Cans	Percent
46-oz. cans:									
Tomato juice	15	36	240	31	104	235	25	27	+ 8
Grapefruit juice	15	36	240	58	141	143	46	33	-28
Pineapple juice	15	36	240	46	130	183	37	33	-11
No. 303 cans (16-oz.):									
Applesauce	19	36	189	137	334	144	87	77	-11
Fruit cocktail	12	36	300	92	272	196	92	67	-27
Wax beans	22	36	164	147	292	99	80	61	-24
Sweet peas	16	36	225	70	224	220	53	58	+ 9
No. 2½ cans (30-oz.):									
Yellow cling peaches	11	36	327	37	192	419	40	56	+40

1/ Located at ends of grocery gondolas. Includes the front measurement plus a portion of each exposed side and is in addition to the shelf display.

2/ During periods when no supplementary displays were made.

3/ Sales when shelf and supplementary displays were in effect

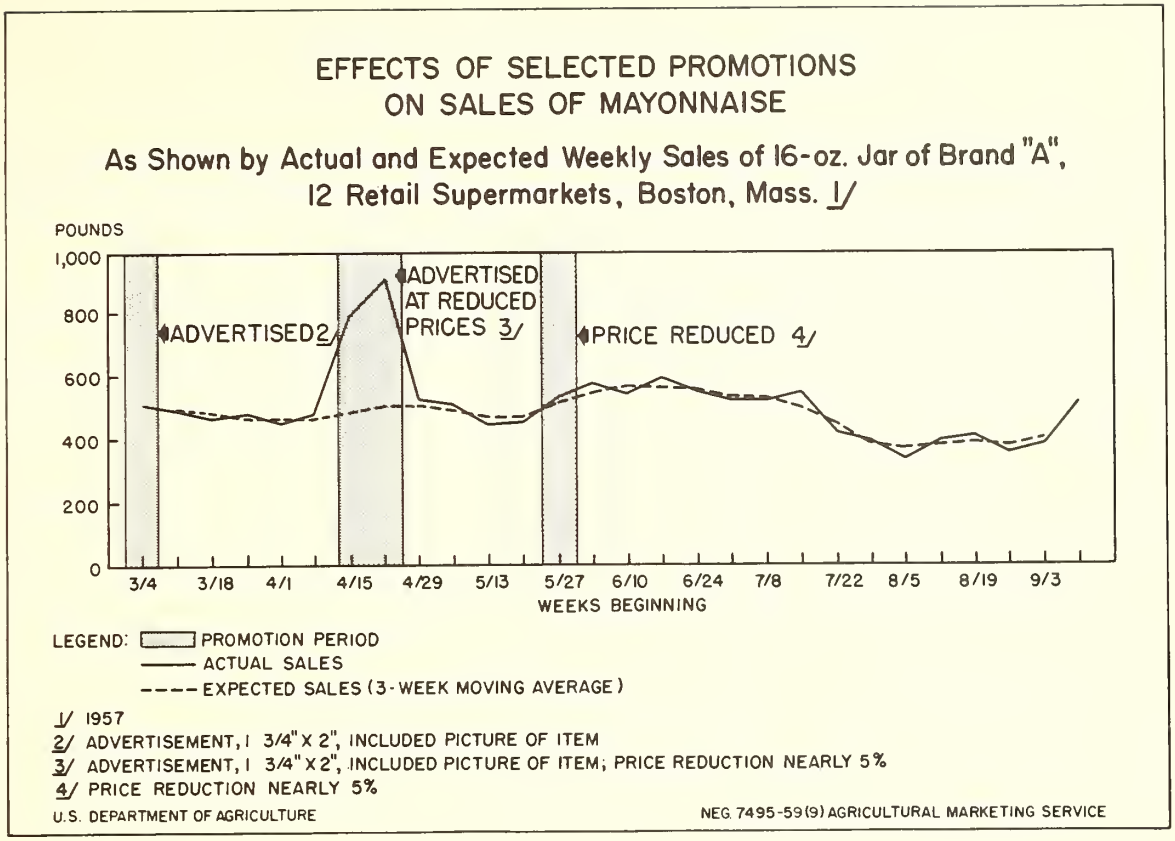


Figure 1

Ground Meats

Sales records were maintained during the period April 8 through May 26, 1957, for three grades of ground meats--fresh, lean, and round ground. 5/ Two-pound packages of fresh ground meat, the economy grade, were advertised at a 12-percent price discount per pound effective Thursday of the week beginning May 13. Prices of the other grades of ground meat as well as the 1-pound packages of the fresh ground remained unchanged. The newspaper advertisement announcing the sale of the 2-pound packages at a reduced price occupied approximately $\frac{1}{2}$ inch by $4\frac{1}{2}$ inches of space. Sales of fresh ground meat during the week of promotion were approximately 17 percent greater than the average of the 5 prepromotion weeks. Ground meat sales during the week following the promotion were about the same as the average of the 5 prepromotion weeks. The change in sales of the promoted grade of ground meat did not adversely affect sales of the nonpromoted grades.

5/ Ground meat is referred to in this report as "fresh ground" (economy grade), "lean ground" (medium priced), and "round ground" (highest priced). These are not official Federal or State grades, but are those used by the cooperating chain at the time of the experiment. The principal difference in physical characteristics between grades is fat content, which generally ranges from 20 to 25 percent for the less expensive to 10 to 12 percent for the more expensive grade. "Round ground" meat was produced from round steak. The sizes of the packages ranged from $\frac{1}{2}$ to 2 pounds, with the majority weighing about 1 pound.

Price Reduction and Supplementary Display

Canned Peaches

Yellow cling peaches, brand N, No. 2½ size cans, were promoted through a 10-percent price reduction and a special supplementary end-of-gondola display during the weeks of June 3 and 24. Average weekly sales for this commodity were nearly 8 times greater than shelf sales alone without promotion.

The average sales recorded during the weeks of June 3 and 24 were nearly double those recorded for canned yellow cling peaches when a special display of identical size and location was used but without an accompanying price reduction (fig. 2).

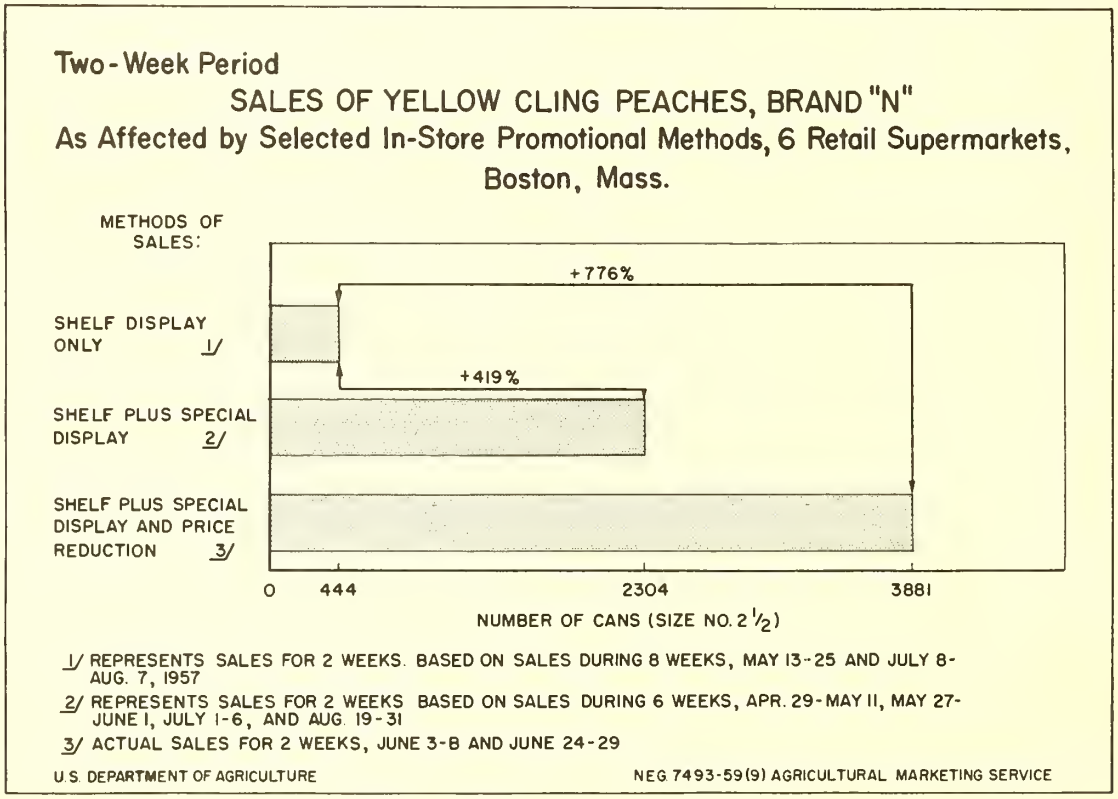


Figure 2

THREE PROMOTIONAL TECHNIQUES COMBINED

Mayonnaise and Salad Dressing

There were three occasions during which mayonnaise and salad dressing were promoted using the three kinds of promotion combined.

1.--Brand A salad dressing, 32-ounce container, was advertised at a 32-percent price reduction for 2 weeks beginning June 3. In addition, each of the test stores maintained a supplementary special display during the 2-week promotion. The week of June 3, the item was featured in a $3\frac{1}{4}$ by $5\frac{1}{4}$ inch newspaper advertisement, which included a picture of the advertised item. The week of June 10, the item again was featured in the newspaper, occupying a space $\frac{1}{4}$ inch by $2\frac{1}{4}$ inches without a picture.

During the period of the combined promotional effort, sales of brand A salad dressing were 700 percent greater the first week of the promotion and 300 percent larger the second week than the average of 3 weeks prior to the promotion (fig. 3).

2.--The 32-ounce size of brand D salad dressing was promoted for 2 weeks beginning July 8. The price was reduced 13 percent and each store maintained a supplementary special display. During the first week of promotion, an advertisement was carried in the newspaper measuring 4 by $5\frac{1}{2}$ inches in area including a picture. No advertising was observed during the second week. Sales were more than 200 percent greater the first week of promotion, and 125 percent more the second, than the 3-week prepromotion average (fig. 3).

3.--The 32-ounce size of brand A mayonnaise was advertised in newspapers for a 2-week period beginning July 22 at a 29-percent price reduction. In addition, each test store maintained a supplementary display. The advertisement occupied $2\frac{1}{2}$ by $3\frac{1}{2}$ inches of space including a small picture of the advertised item during the first week, and $\frac{1}{4}$ inch by 4 inches, but without a picture, the second week. Sales were 400 percent greater the first week of promotion, and 300 percent larger the second, than average weekly sales in the three weeks prior to the promotion (fig. 3).

Canned Tomato and Grapefruit Juice

The 32-ounce jar of brand G tomato juice and 18-ounce cans of all brands of grapefruit juice stocked by the 12 sample stores were promoted for 2-week periods by combining the three kinds of promotion. A supplementary display of the promoted tomato juice, maintained at the end of a gondola in each store at a 14-percent price reduction was supported by newspaper advertising. The advertising space measured 1 inch by $7\frac{1}{2}$ inches in size the first week (April 1-6) and $\frac{1}{2}$ inch by 4 inches the second week (April 8-13). The grapefruit juice was featured on special end-of-gondola displays at a 26-percent reduction in price. The first week of promotion (May 13-18) additional support was provided by a

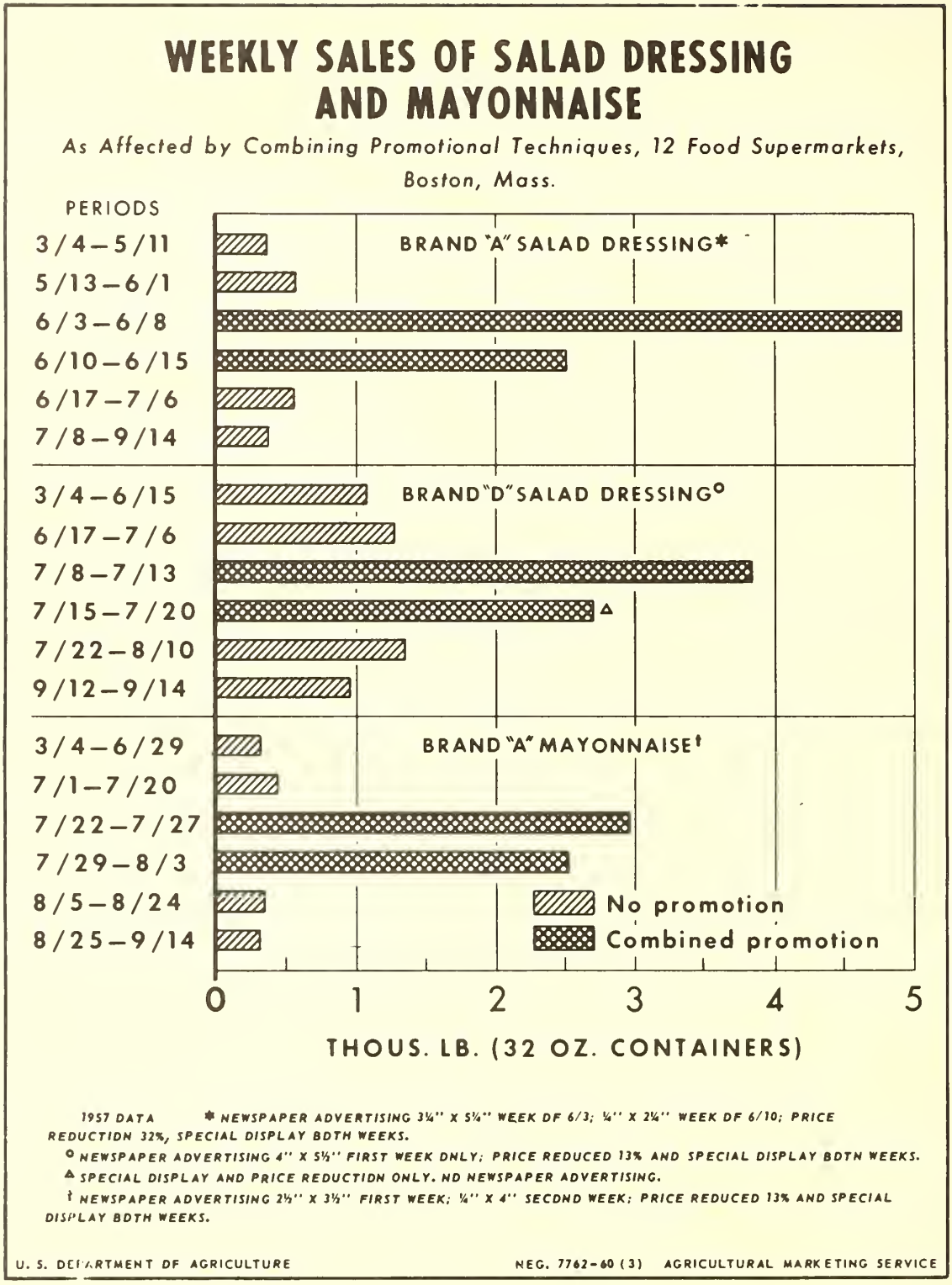

WEEKLY SALES OF SALAD DRESSING AND MAYONNAISE
As Affected by Combining Promotional Techniques, 12 Food Supermarkets, Boston, Mass.
PERIODS
3/4—5/11
5/13—6/1
6/3—6/8
6/10—6/15
6/17—7/6
7/8—9/14
BRAND "A" SALAD DRESSING*
3/4—6/15
6/17—7/6
7/8—7/13
7/15—7/20
7/22—8/10
9/12—9/14
BRAND "D" SALAD DRESSING°
3/4—6/29
7/1—7/20
7/22—7/27
7/29—8/3
8/5—8/24
8/25—9/14
BRAND "A" MAYONNAISE†
No promotion
Combined promotion
0
1
2
3
4
5
THOUS. LB. (32 OZ. CONTAINERS)
1957 DATA
* NEWSPAPER ADVERTISING 3¼" X 5¼" WEEK OF 6/3; ¼" X 2¼" WEEK OF 6/10; PRICE REDUCTION 32%, SPECIAL DISPLAY BOTH WEEKS.
° NEWSPAPER ADVERTISING 4" X 5½" FIRST WEEK ONLY; PRICE REDUCED 13% AND SPECIAL DISPLAY BOTH WEEKS.
△ SPECIAL DISPLAY AND PRICE REDUCTION ONLY. NO NEWSPAPER ADVERTISING.
† NEWSPAPER ADVERTISING 2½" X 3½" FIRST WEEK; ¼" X 4" SECOND WEEK; PRICE REDUCED 13% AND SPECIAL DISPLAY BOTH WEEKS.
U. S. DEPARTMENT OF AGRICULTURE
NEG. 7762-60 (3) AGRICULTURAL MARKETING SERVICE

Figure 3

newspaper advertisement, $1\frac{1}{4}$ inches by 3 inches in size. No advertising appeared for grapefruit juice the second week (May 20-25).

Grapefruit juice sales in 18-ounce cans were eleven times larger during the 2 weeks of promotion than during biweekly nonpromotion periods. Sales of brand G tomato juice were nearly 4 times larger during the combined promotion (fig. 4). The sales change of the promoted brands resulted in 114 percent gain in total grapefruit juice sales and an 88 percent increase in total tomato juice sales.

In addition to the overall increase in juice sales, the promoted grapefruit juice also increased its percentage share of the total grapefruit juice market from 12 percent for nonpromotion weeks to 65 percent during the promotion. Similarly, the promoted brand of tomato juice increased its share of the total tomato juice sales from 22 to 53 percent.

Canned Wax Beans and Peas

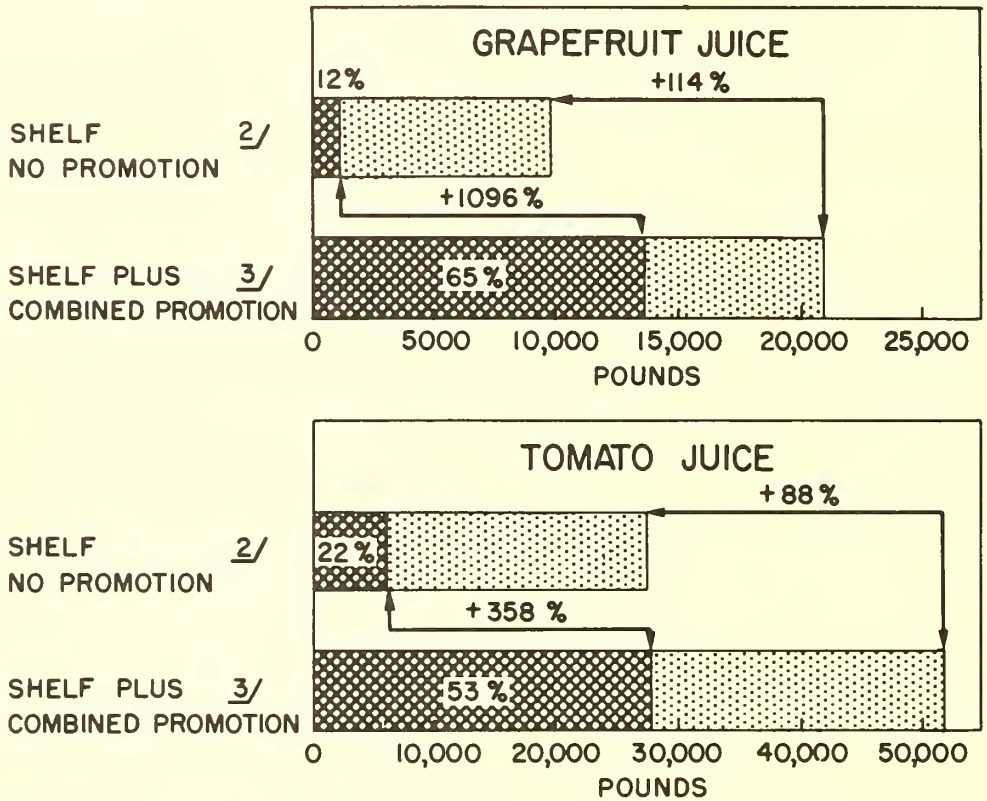
Cut wax beans and large sweet peas, brand A, 303 can size (16-ounce) were promoted using all types of promotion during the weeks of June 3 and 10. Both items were reduced in price nearly 15 percent and special displays were placed at the end of a grocery gondola in all 12 test stores. A newspaper advertisement occupying $3\frac{1}{2}$ by $5\frac{1}{4}$ inches of space equally divided between the products appeared the first week of promotion. During the second week wax beans were not advertised and only one small line measuring 1/8 inch by 3 inches was used to advertise peas.

Sales of beans during the combined promotion period were $2\frac{1}{2}$ times regular shelf sales of nonpromotion weeks; sales of peas were $5\frac{1}{2}$ times regular shelf sales. This increase was more than double the sales gains in a similar period when beans and peas were promoted through the use of increased display space only (fig. 5). Sales of both products were 35 percent higher during the first week of the 2-week combined promotion than the second week.

Canned Peaches

The sales impact of a combined promotion for canned Elberta peaches, brand F, No. $2\frac{1}{2}$ can, (30-ounce), was observed during a 2-week period, April 29-May 11. Special end-of-gondola displays were used both weeks and the item was reduced in price 15 percent. Newspaper advertisements $3\frac{1}{2}$ by $4\frac{1}{4}$ inches in area were employed the first week, and $\frac{1}{4}$ by $4\frac{1}{4}$ inches the second week. During the 2 weeks of combined promotion, total sales of the promoted peaches were nearly 17 times greater than the biweekly sales average of nonpromotion periods. Sales were 40 percent greater the first week than the second week of promotion.

Two-Week Period
SALES OF CANNED GRAPEFRUIT & TOMATO JUICES
As Affected by Combined Promotion,
12 Retail Supermarkets, Boston, Mass. 1/



SALES OF PROMOTED BRANDS: GRAPEFRUIT, ALL BRANDS OF 18-OZ. CANS; TOMATO JUICE, BRAND "G", 32-OZ. SIZE

SALES OF ALL BRANDS & CONTAINER SIZES OTHER THAN THE ONE PROMOTED

TOTAL SALES

1/ COMBINED PROMOTION MEANS USING ADVERTISING, PRICE REDUCTION & INCREASED DISPLAY

2/ REPRESENTS SALES FOR 2 WEEKS. BASED ON SALES OF GRAPEFRUIT APR. 1-13, JUNE 10-22, AND JULY 22 - AUG. 3; TOMATO JUICE, MAY 13-25, JUNE 10-22, AND JULY 22 - AUG. 3, 1957

3/ ACTUAL SALES OF GRAPEFRUIT, MAY 13-25, AND OF TOMATOES, APR. 1-13, 1957

U.S. DEPARTMENT OF AGRICULTURE NEG. 7492-59 (9) AGRICULTURAL MARKETING SERVICE

Figure 4

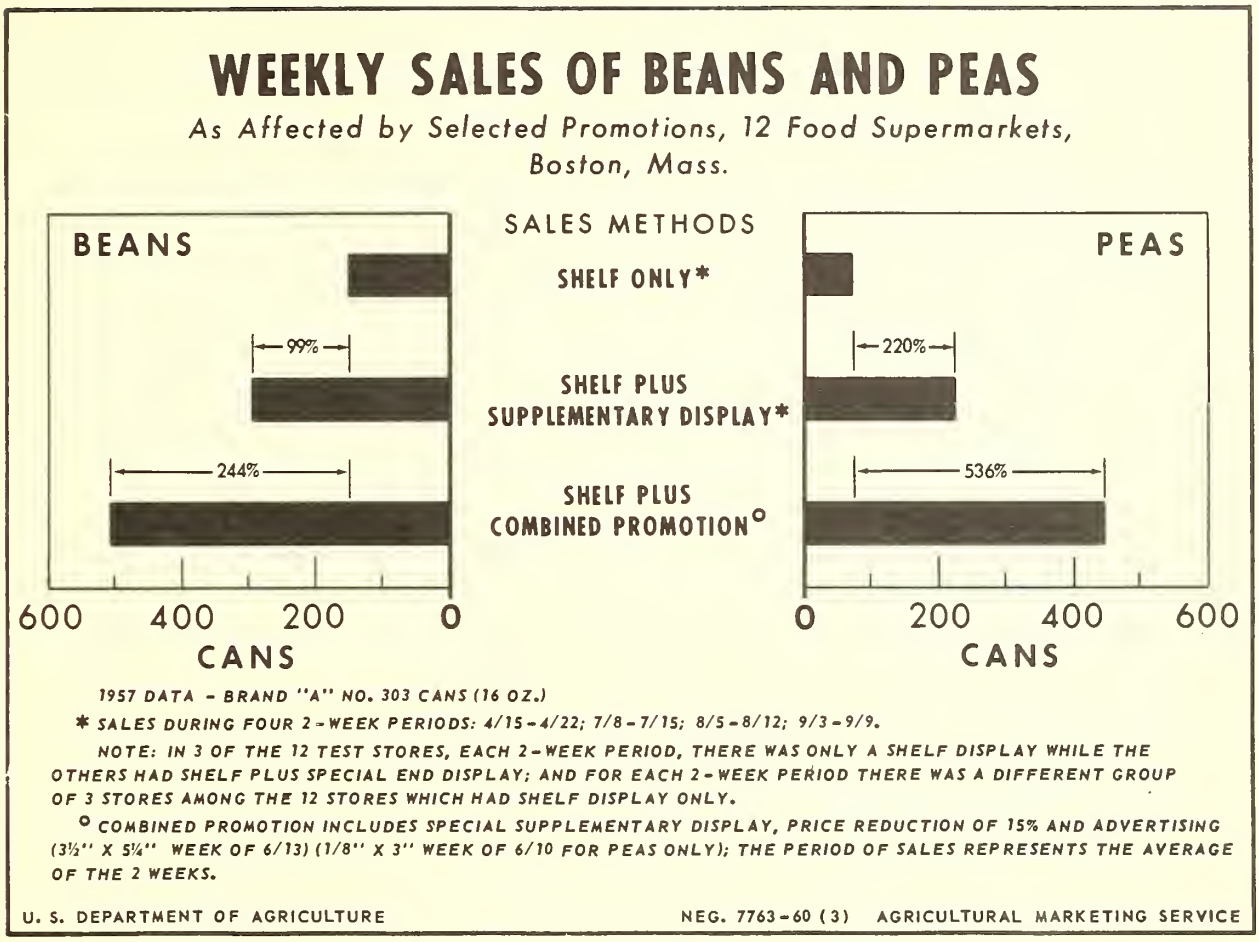


Figure 5

EFFECT OF PROMOTION ON SALES OF SELECTED BRANDS AND ON TOTAL SALES

The sales increase associated with the use of special supplementary displays alone had no appreciable effect on sales of competing brands and was of sufficient magnitude to result in a net gain in total sales for each group promoted (table 2). This was also true of the increases following use of two promotional methods--newspaper advertising and price reduction or special display and price reduction. When all three kinds of promotion were used--price reduction, advertising, and supplementary display--there were substantial gains in total sales, but sales of some of the competing items decreased at times to a moderate degree. For example, data shown in table 3 indicate that promotion of the 32-ounce jar of brand A mayonnaise, a medium-priced brand, was associated with decreased sales of the four competing nonpromoted brands. The largest percentage decrease occurred in sales of brand B, which was the low-priced one. During promotion, the price of brand A was held at a level below that of brand B, which tended to attract more purchases away from the latter than from other higher-priced brands.

Table 2.--Effects of special supplementary display of selected canned food items on sales of competing items, 12 food supermarkets, Boston, Massachusetts 1/

Time periods	Cut wax beans			Sweet peas			Grapefruit juice			Tomato juice		
	Item on special display (16-ounce) brand A	Nonpromoted items	Total	Item on special display (16-ounce) brand A large sweet	Nonpromoted items	Total	Item on special display (46-ounce all brands)	Nonpromoted items	Total	Item on special display (46-ounce) brand A	Nonpromoted items	Total
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Nonpromotion 2/	100	100	100	100	100	100	100	100	100	100	100	100
Promotion 2/	198	95	118	318	100	122	244	100	179	335	95	123
Percentage change associated with promotion	+98	-5	+18	+218	0	+22	+144	0	+79	+235	-5	+23

1/ Item refers to one can size of a given brand.
2/ Sales during four 2-week periods.
Note: In 3 of the 12 stores, each 2-week period, there was only a shelf display while the others had shelf plus special end display; for each 2 weeks there was a different group of 3 stores which had shelf display only.

Table 3.--Effect of combination of 3 promotional techniques on sales of specified canned foods, 12 food supermarkets, Boston, Mass., 1957

Commodity	Nonpromotion period	Promotion period	Percentage change in sales
	Percent	Percent	Percent
Mayonnaise 1/			
Brand A (medium priced) 32-ounce size promoted	100	321	+221
Nonpromoted brands:			
Low priced, brand B	100	57	-43
High priced:			
Brand C	100	84	-16
Brand D	100	75	-25
Brand E	100	80	-20
Total nonpromoted brands	100	75	-25
All brands	100	116	+16
Grapefruit juice, all brands 2/:			
18-ounce size promoted	100	1,200	+1,100
Nonpromoted sizes	100	85	-15
All sizes	100	214	+114
Tomato juice (brand G) 3/:			
32-ounce size promoted	100	459	+359
Nonpromoted sizes	100	112	+12
All sizes	100	188	+88
Salad dressing 4/:			
Brand A promoted 5/:			
Sales of brand A	100	425	325
Sales of brand D	100	93	-7
All brands	100	178	+78
Brand D promoted 6/:			
Sales of brand A	100	92	-8
Sales of brand D	100	161	+61
All brands	100	144	+44

1/ Nonpromotion period 8 weeks beginning April 29, May 6, 13, 20, 27, June 17, 24, and July 1. Promotion period 2 weeks beginning July 22. Prices reduced 29%; advertised ($2\frac{1}{2}$" x $3\frac{1}{2}$" including picture 1st week, $\frac{1}{4}$"x4" 2nd week); special supplementary display.

2/ Nonpromotion period April 1-13; June 10-22, July 22-August 3. Promotion period May 13-25. Price reduced 26%; advertising $1\frac{1}{4}$"x 3" week of May 13 only; supplementary display.

3/ Nonpromotion period May 13-18, June 10-15, and July 22-Aug. 3. Promotion period April 1-13; price reduced 14%; advertising $7\frac{1}{2}$"x 1" week of April 1, $\frac{1}{2}$"x 4" week of April 8; supplementary display.

4/ Nonpromotion period for both brands weeks beginning April 29, May 6, 13, 20, 27, June 17 and 24.

5/ Promotion period June 3-15. Advertising $3\frac{1}{4}$"x $5\frac{1}{4}$", including picture 1st week, $\frac{1}{4}$" x $2\frac{1}{4}$" second week; price reduced 32%; special display.

6/ Promotion period July 1-13. Advertising 1st week only 4" x $5\frac{1}{2}$" including picture; price reduced 13%; special display.

Figure 6 shows the market share of brand A mayonnaise and of competing brands before, during, and after promotion. Although brand A's market share increased substantially during the promotion, this share subsequently returned to the level prevailing prior to the promotion.

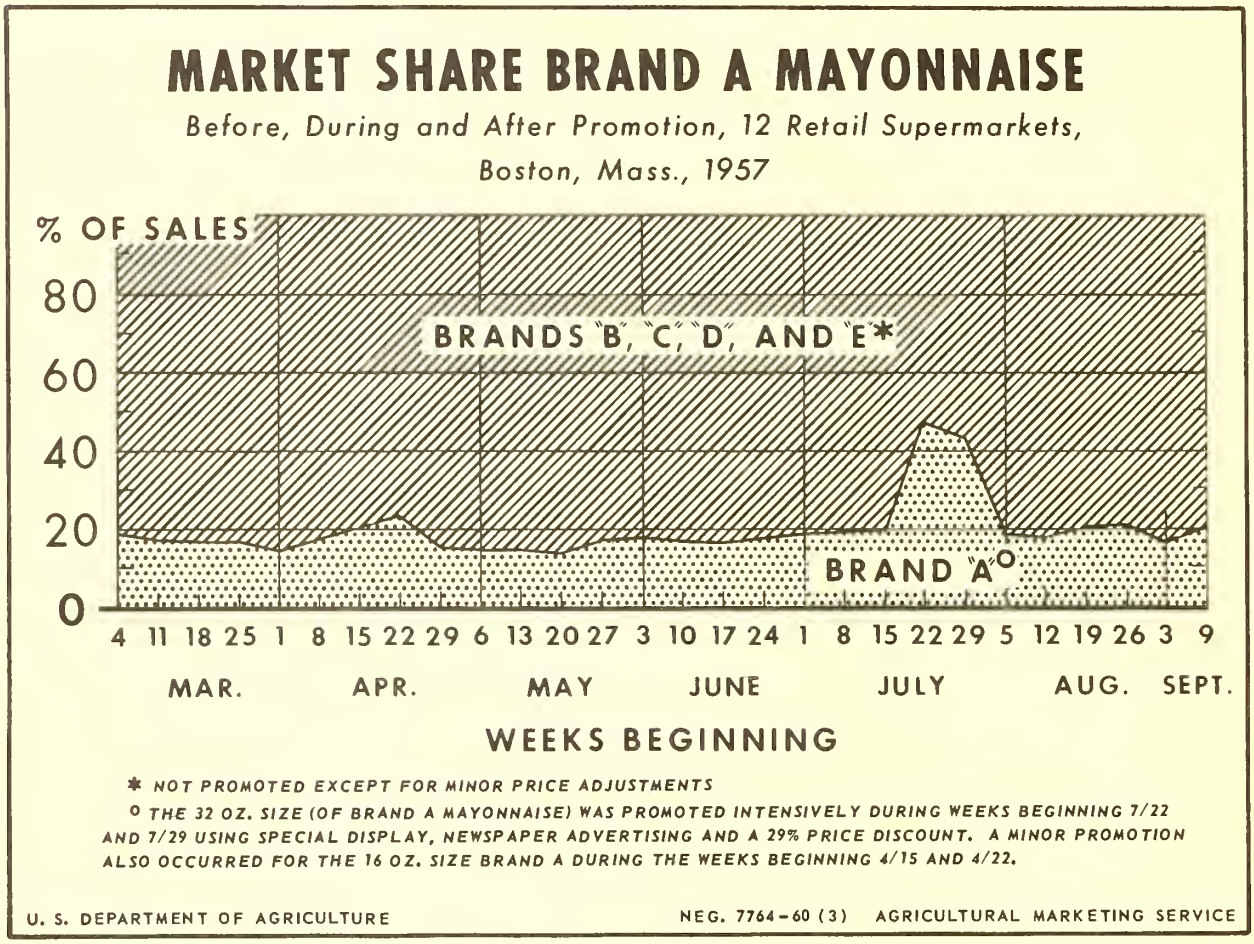


Figure 6

Salad dressing sales reacted similarly when either of the two brands carried by the retailer was promoted. The increase in sales of the promoted brand in each case was of sufficient magnitude to result in a net gain in total salad dressing sales. However, the direct substitution by shoppers of the promoted for the nonpromoted brands was not so marked as for mayonnaise. As shown in table 3, the sales decrease of the nonpromoted brand associated with the promotion of the competing brand was in each case less than 10 percent, regardless of which of the two brands was promoted.

The promotion of grapefruit juice, 18-ounce cans, all brands, using advertising, price reduction, and special display, had a moderately adverse effect on sales of the nonpromoted brands and sizes. The promotion of 32-ounce brand G tomato juice using all three techniques, had no adverse effects on sales of the nonpromoted brands. In both cases, however, total juice sales benefited as the result of the promotion (fig. 4, table 3).